
Fast Projects That Are of Great Value

*Tangible Result Driver – Dave Nichols,
Director of Program Delivery*

MoDOT customers expect that transportation projects be completed quickly and provide major improvements for travelers. MoDOT will honor project commitments because it believes in integrity.



Fast Projects That Are of Great Value

Percent of estimated project cost as compared to final project cost

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Machele Watkins, Transportation Planning Director

Purpose of the Measure:

This measure determines how close MoDOT's total program completion costs are to the estimated costs.

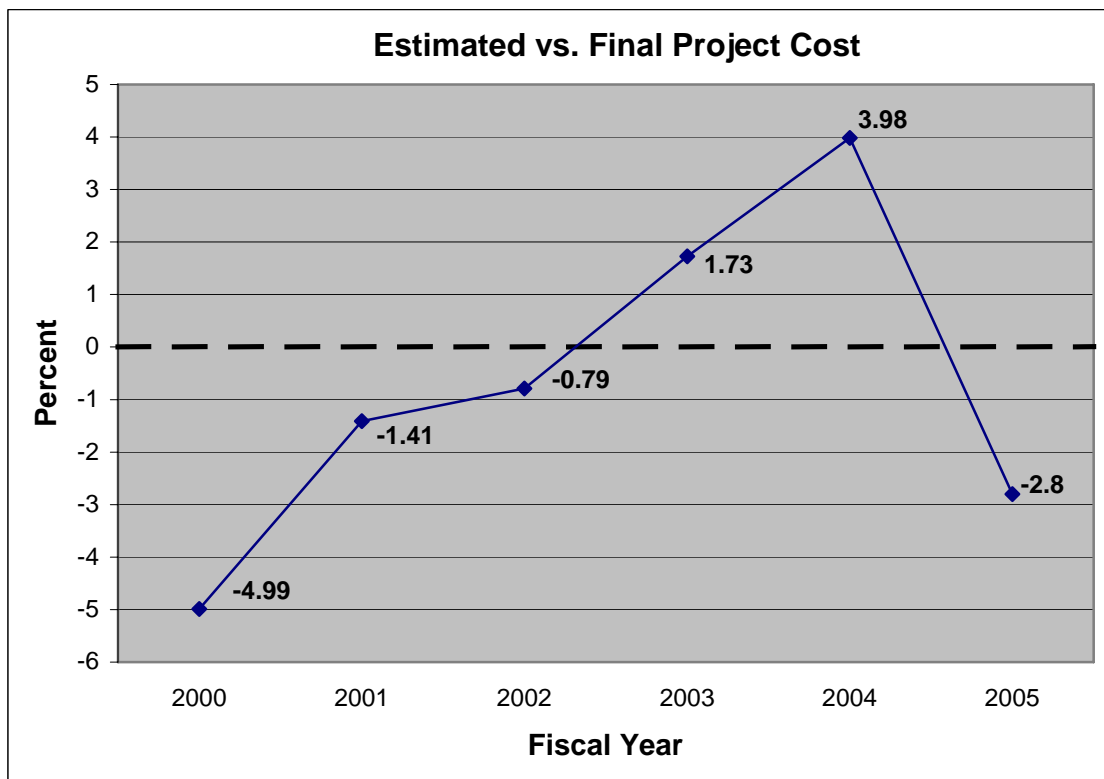
Measurement and Data Collection:

The department determines the completed project costs and compares them to the estimated costs. The completed project costs are reported during the state fiscal year in which the project is completed.

Project costs include design, right of way purchases, utilities, construction, inspection and other miscellaneous costs. The estimated cost is based on the amount included in the most recently approved Statewide Transportation Improvement Program. Completed costs include actual expenditures. Litigation filed on projects after a project has been completed will not be tracked by this method of data collection. However, this is a rare occurrence. Positive numbers indicate the final (completed) cost was higher than the estimated cost.

Improvement Status:

The cost trend through FY 2004 reflects the higher number of projects resulting from bonding in FY 2001, 2002 and 2003. The decrease in 2005 reflects the reduced number of projects without bonding. The ideal status is no deviation in the estimated vs. final project cost, or 0%.



**Desired
Trend:**

N/A

Positive numbers indicate the final (completed) cost was higher than the estimated cost.

Fast Projects That Are of Great Value

Number of calendar days it takes to go from the programmed commitment on the Statewide Transportation Improvement Program to construction completion

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Machele Watkins, Transportation Planning Director

Purpose of the Measure:

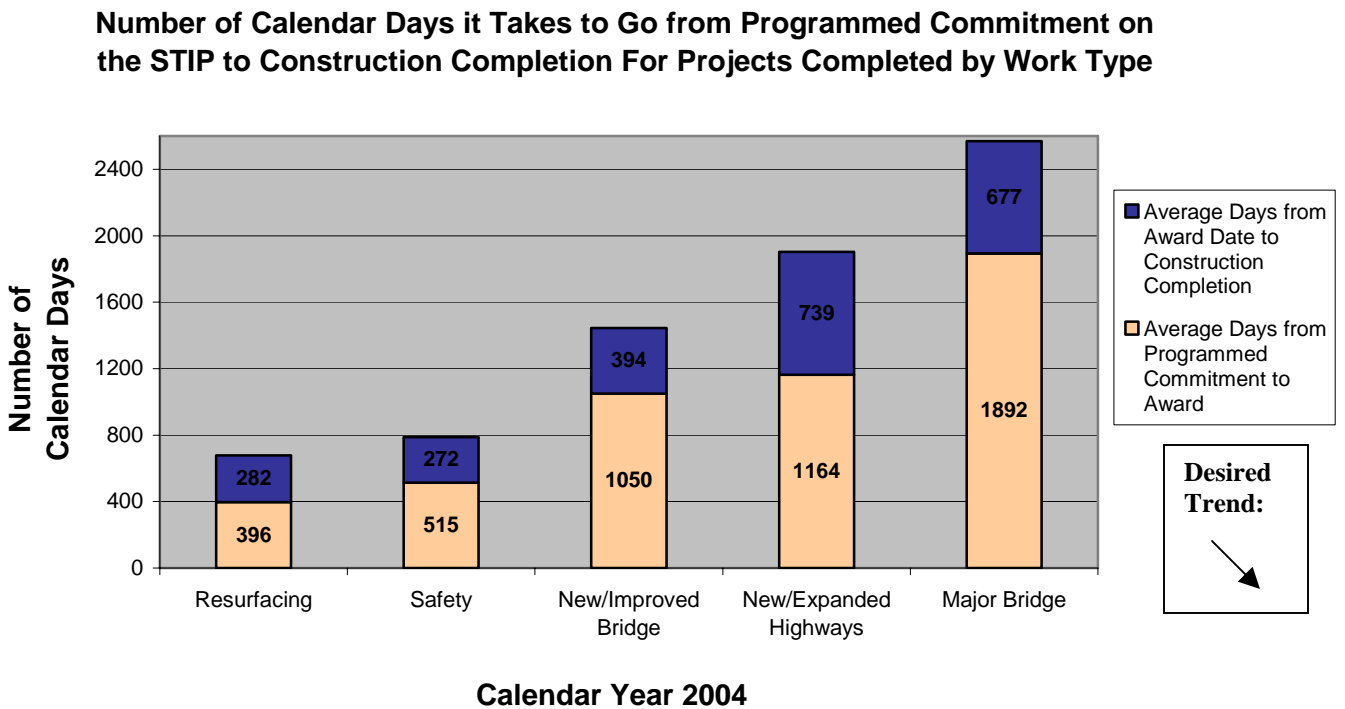
This measure determines how quickly projects go from the programmed commitment to construction completion. Customers perceive this time as 'project wait-time.'

Measurement and Data Collection:

MoDOT compares how long it takes from when the project is added to the Statewide Transportation Improvement Program to when the construction work is finished, and the public is using the new transportation improvement. Data is categorized by the type of work, and distinguishes between design and construction stages.

Improvement Status:

Of the projects completed in 2004, the quickest projects were resurfacing projects, which were completed in less than two years. The projects that took the longest time to complete are major bridge projects, which took about seven years. The construction phase (in blue) ranged from under one year for resurfacing projects to two years for new or expanded highways and major bridges. The design phase (in purple) generally took more time than construction, ranging from just over one year for resurfacing projects to just over five years for major bridges. Major bridges required much more time because of the complexity of the design work, the increased amount of public and other governmental agency involvement, the amount of environmental and cultural work required, the purchasing of right-of-way, and sometimes, the coordination with neighboring states.



Fast Projects That Are Of Great Value

Percent of projects completed within programmed amount

Results Driver: Dave Nichols, Director of Project Delivery

Measurement Driver: Dave Ahlvers, State Construction Engineer

Purpose of Measure:

The measure tracks the percentage of projects completed within the programmed amount. The cost includes such items as engineering, right of way and contract payments.

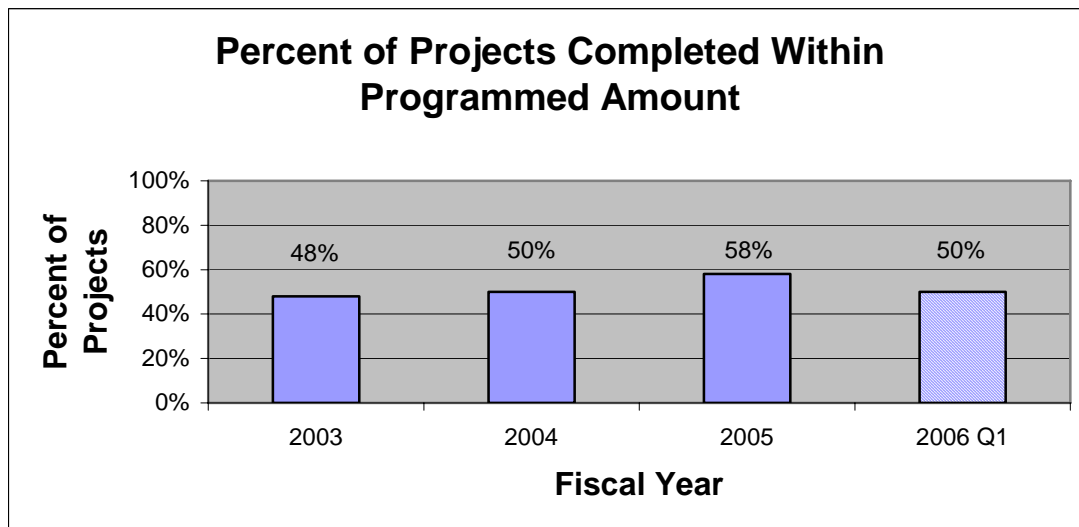
Measurement and Data Collection:

The completed project cost is compared to the estimated cost for each project. The percentage of projects completed within the estimated cost is gathered from across the state.

Project costs include design, right of way purchases, utilities, construction payments, inspection and other miscellaneous cost.

Improvement Status:

MoDOT would like to see all projects completed within the programmed amount. The goal is to deliver projects at the programmed amount allowing the greatest number of projects to be built with the funding available. Our data indicates that there is a great deal of deviation among individual projects with half over and half under budget. Continued emphasis is being placed on scoping projects and developing estimates that represent the true cost of delivering the projects.



Desired Trend:



Fast Projects That Are Of Great Value

Percent of projects completed on time

Results Driver: Dave Nichols, Director of Project Delivery

Measurement Driver: Dave Ahlvers, State Construction Engineer

Purpose of the Measure:

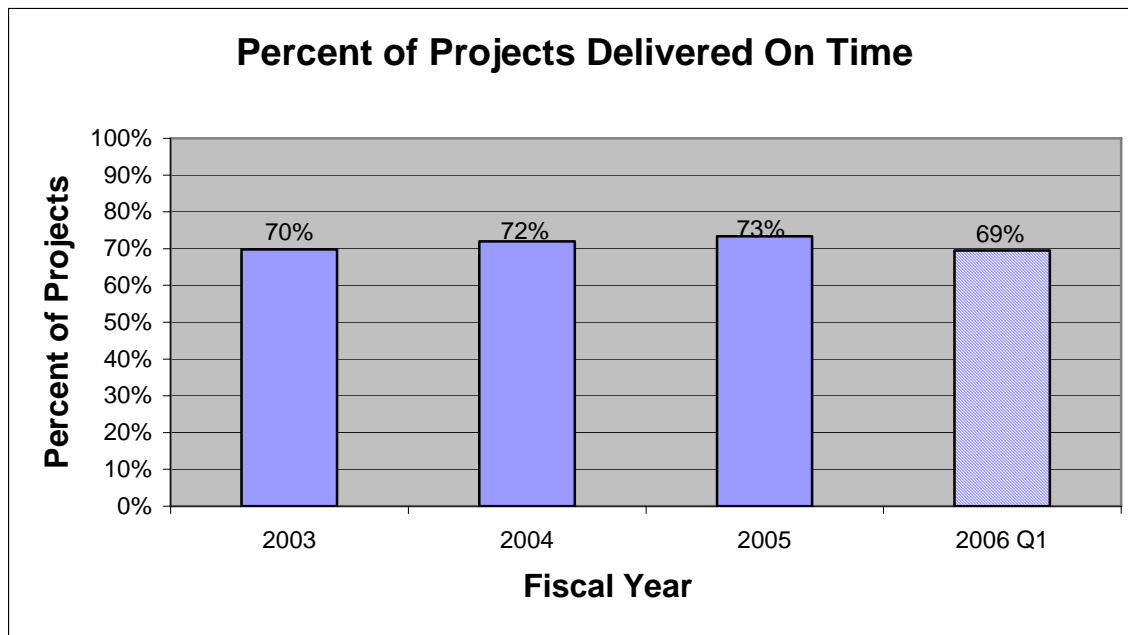
This measure tracks the percentage of projects completed by the commitment date established in the contract. It will indicate MoDOT's ability to complete projects by the agreed upon date.

Measurement and Data Collection:

The project manager will establish project completion dates for each project. This will be documented in MoDOT's SiteManager and STIP databases. It will be part of the Plans, Specifications & Estimates submittal. The actual completion date will be documented by the Resident Engineer and placed in MoDOT's Management System.

Improvement Status:

The results indicate a small decrease from previous years in the percent of projects completed on time. MoDOT has focused on reducing the number of days available for construction in order to reduce congestion and inconvenience to the traveling public, while stressing the importance of completing projects on time. An emphasis has been placed on reviewing construction schedules and assessment of liquidated damages, which will lead to improvements in timely completion.



**Desired
Trend:**



Fast Projects That Are Of Great Value

Percent of change for finalized contracts

Results Driver: Dave Nichols, Director of Project Delivery

Measurement Driver: Dave Ahlvers, State Construction Engineer

Purpose of the Measure:

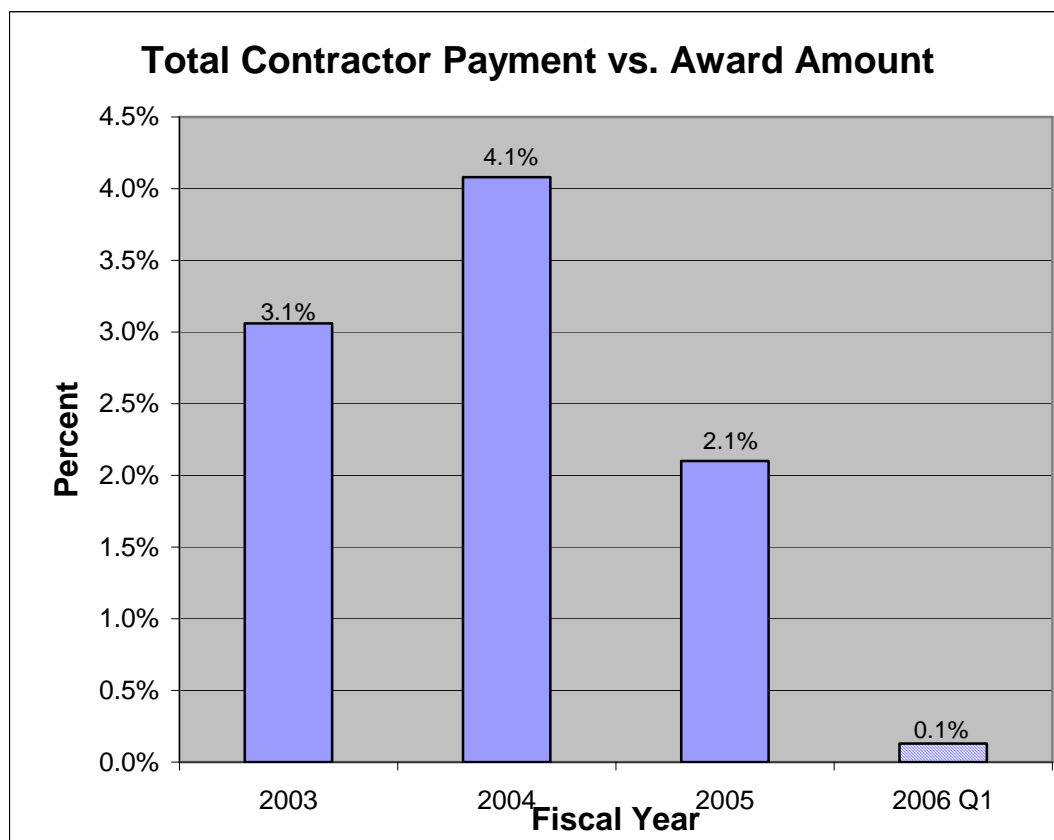
The measure tracks the percentage difference of total construction payouts to the original contract award amounts. This indicates how many changes are made on projects after they are awarded to the contractor.

Measurement and Data Collection:

Contractor payments are generated through MoDOT's SiteManager database and processed in the financial management system for payment. Change orders document the underrun/overrun of the original contract.

Improvements Status:

MoDOT's performance on this item has improved significantly since 2004. In FY05 there was savings of \$15 million. MoDOT has saved an additional \$4,830,000 through the first quarter of fiscal 2006. The improvement is a result of a strong emphasis placed on constructing projects within budget, the use of practical design and value engineering. By limiting overruns on contracts the department can deliver more projects, which will lead to an overall improvement in the entire highway system.



**Desired
Trend:**

N/A

Fast Projects That Are Of Great Value

Average construction cost per day by contract type

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Dave Ahlvers, State Construction Engineer

Purpose of the Measure:

This measure tracks the cost per day for project completion to determine the impact to the traveling public, enabling MoDOT to better manage project completion needs.

Measurement and Data Collection:

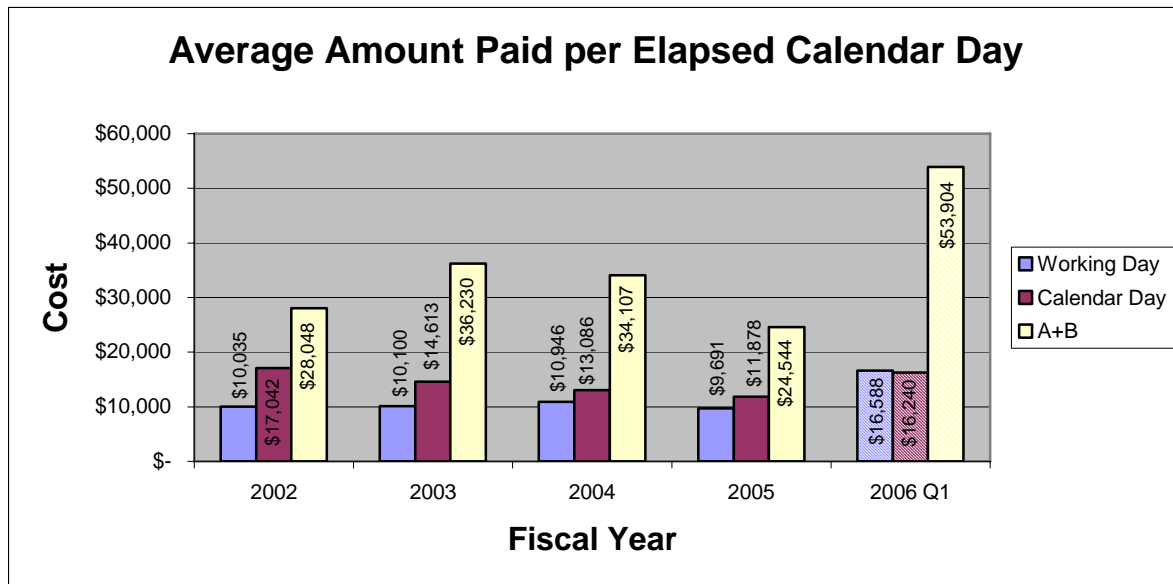
This information is gathered by extracting the actual time used for construction from the summary of working days in the SiteManager database and dividing it by the total costs of the project.

The measurement groups construction contracts into three categories:

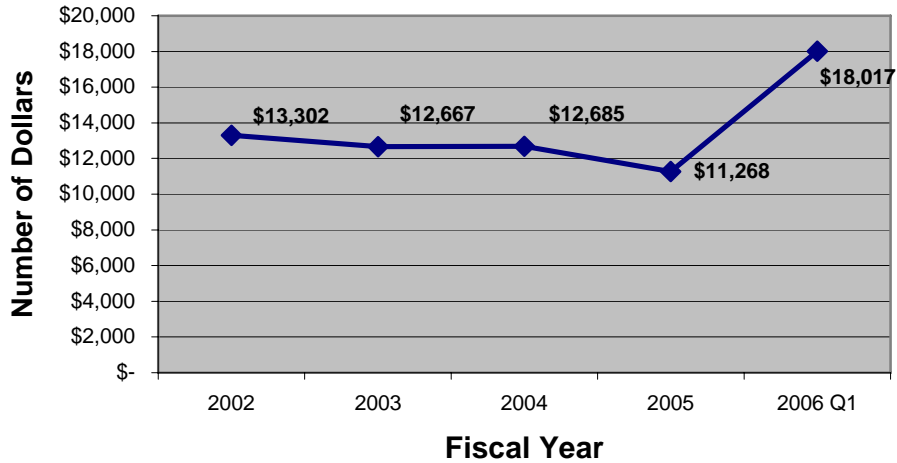
- **WD** working day contracts
- **CD** calendar day contracts and;
- **A + B** or innovative contracts that provide incentive/disincentives to the contractor for early completion.

Improvement Status:

The greater use of A+B and calendar-day contracts resulted in a larger amount paid per calendar day. MoDOT's strategy of utilizing innovative contracting techniques has resulted in faster contract completion and fewer delays to the traveling public. We are reviewing the contract type selected to make a determination if we are using our resources most effectively for timely completion of projects.



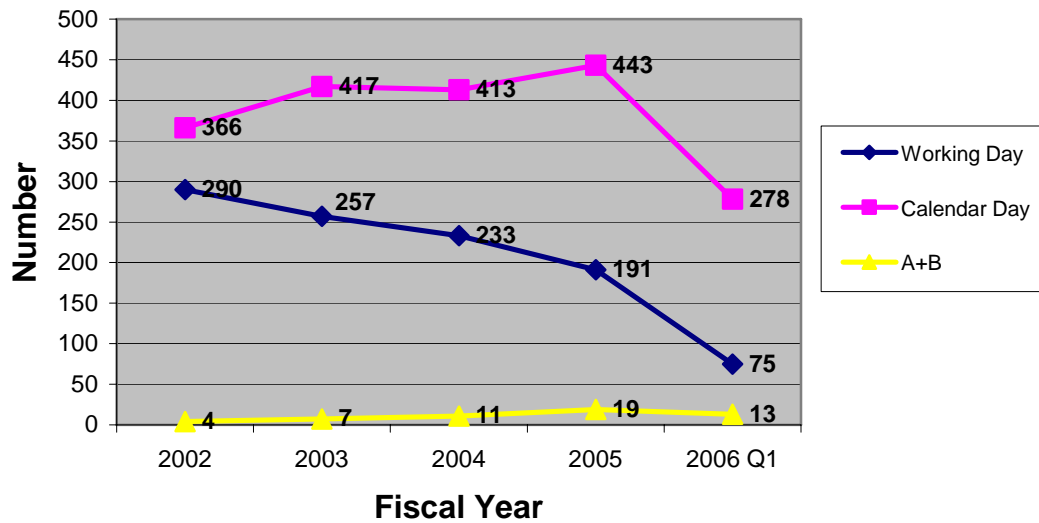
Average Amount Paid per Elapsed Calendar Day All Contract Types



Desired
Trend:



Number of Active Contracts



Desired
Trend:

N/A

Fast Projects That Are Of Great Value

Percent of customers that feel completed projects are the right transportation solutions

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Ernie Perry, Organizational Performance Administrator

Purpose of the Measure:

This measure provides information regarding the public's perception of MoDOT's performance in providing the right transportation solutions.

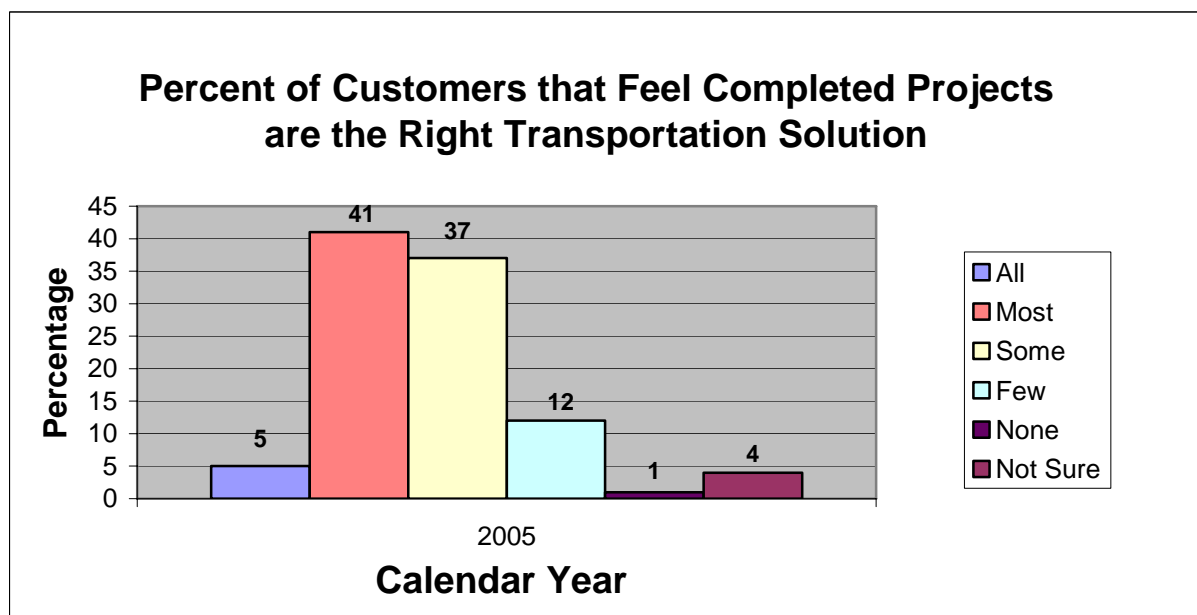
Measurement and Data Collection:

Data was collected through a statewide telephone survey conducted for the long-range planning initiative called *Missouri Advance Planning*. The survey effort included interviews with 3,100 Missourians with an overall margin of error of +/- 2.9 percent. This measure will be collected on an annual basis through a stratified, statewide telephone survey.

Improvement Status:

Forty-six percent of the sample feels most or all of MoDOT's transportation solutions were the right solutions. Thirty-seven percent feels some of the projects were the right solutions, and 13 percent feels that few or none of the projects were the right solution to their transportation needs.

While this is a positive starting point, MoDOT continues to utilize community outreach and communication efforts to gain greater public support so all projects are viewed as the right solution. Additional analysis of the respondents stating that few or none of the projects were the right solutions will be completed in November 2005 to identify performance gaps that can then be addressed.



Fast Projects That Are of Great Value

Percent of project timeliness as compared to other state DOTs

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Kathy Harvey, State Design Engineer

Purpose of the Measure:

This measure tracks how MoDOT compares to other state Departments of Transportation with regards to project timeliness. As MoDOT develops projects working with the public, we give them schedules for construction that include an estimate of when the road will be open to traffic. In addition, our construction contracts have completion times included that are often shown on construction signing. Comparing the percentage of times that MoDOT completes construction when promised with other states will help demonstrate its level of performance to the public and could point out a need for an educational effort with the public or the need for partnering efforts.

Measurement and Data Collection:

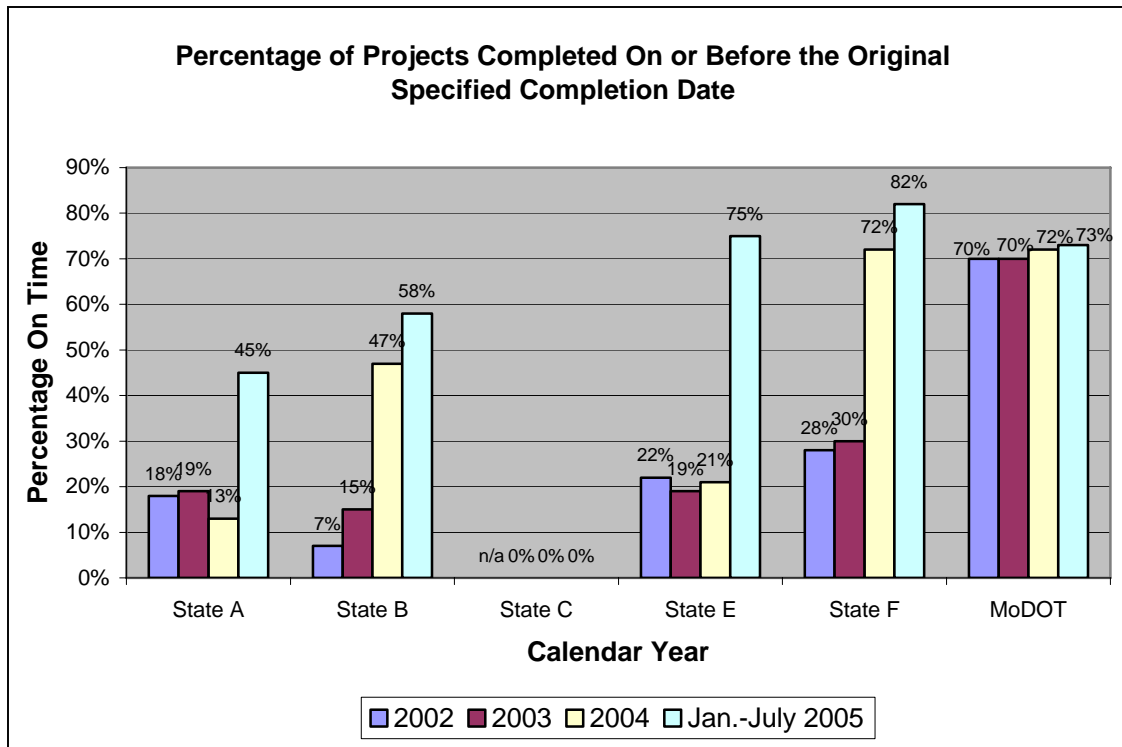
The AASHTO Standing Committee on Quality has launched a pilot project (through its Subcommittee on Performance Measures) for comparative performance measures with regards to the topic of project delivery. MoDOT is participating in this prototype venture along with five other states – Delaware, New Mexico, Ohio, Florida and Virginia. The committee developed a survey that was completed this summer. It requested very specific information related to how each DOT defines its universe of contracts or projects for measuring performance, how it defines its performance measures, and the business rules, data fields and time horizons utilized to track performance.

MoDOT customers have an expectation that our roadway construction be completed when promised, despite factors – including unfavorable and unpredictable weather – that can cause significant delays. For this measure, the definition of ‘on time’ selected is as follows: *“The contract must be completed on or before the original specified completion date.”*

Improvement Status:

MoDOT compares quite favorably, with indicators between 70-73 percent for the four data points. The other states, listed anonymously here because that was a condition of participation in the pilot project, have posted on-time percentages between 0-82 percent.

None of the definitions that have been developed to date for the purpose of this survey have gone far enough to enable the tracking of project timeliness from a “needs identification to ribbon cutting” perspective. MoDOT intends to advocate this scope as the subcommittee continues its work.



Desired Trend:

Fast Projects That Are of Great Value

Percent of projects that represent great value

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Kathy Harvey, State Design Engineer

Purpose of the Measure:

This measure tracks how MoDOT projects provide great value once they are constructed and open to traffic. When the measure is established and a baseline trend is available, it will show at what level MoDOT is providing projects of great value.

Measurement and Data Collection:

Defining 'value' is difficult in establishing this measure – how should MoDOT define it ... how do other DOTs define it ... how does the public define it? A question in the "Missouri Advance Plan: Survey of Missouri Adults," completed in May 2005, is related to this measure and has been used to provide the information shown below.

Improvement Status:

MoDOT customers expect to receive at least what they wanted – or more – for their transportation dollars. The best way MoDOT has for evaluating this expectation is through the *Missouri Advance Planning (MAP)* survey conducted during one week in May 2005. Of those persons surveyed, only 43 percent feel Missouri uses its transportation dollars efficiently and effectively. However, this survey was conducted just as many of the Smooth Roads Initiative (SRI) projects were getting underway. The SRI projects are being funded through Amendment 3, passed by Missouri voters in Nov. 2004.

There could be other ways to measure the value of MoDOT projects. MoDOT has submitted a research proposal to the National Cooperative Highway Research Program that would provide standardized costs of doing transportation business for peer states. It could be about two years before data is available. Besides providing appropriate regional comparisons of construction and materials costs and other DOT activities, it would answer questions such as the following. *How does MoDOT compare to a peer state in the cost of construction of one mile of road and mowing one acre of right of way? How does MoDOT compare in relation to peer states in square-foot costs to build a bridge? How do MoDOT's public involvement costs per project compare to other peer states?*

MoDOT has also entered into a cooperative effort with the Missouri Department of Economic Development to analyze the impacts road and bridge projects have on the state's economy, revenue and demographics. The partnership will look at 20 projects per year. This analysis of transportation projects' influences on job creation and other economic development factors will help clarify projects' value. The information will be used to help the departments plan and invest funds and to show the benefits the state gets for its transportation investments.

